<110> Hellerqvist, Carl
      Fu, Changlin

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<151> 1998-07-22

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Met Arg Ser Pro Val Arg Asp Leu Ala Arg Asn Asp Gly Glu Glu Ser
 1   5   10   15

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Thr Asp Arg Thr Pro Leu Leu Pro Gly Ala Pro Arg Ala Glu Ala Ala
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cca gtg tgc tgc tct gct cgt tac aac tta gca att ttg gcc ttt ttt   201
Pro Val Cys Cys Ser Ala Arg Tyr Asn Leu Ala Ile Leu Ala Phe Phe
         35   40   45

ggt ttc ttc att gtg tat gca tta cgt gtg aat ctg agt gtt gcg tta   249
Gly Phe Phe Ile Val Tyr Ala Leu Arg Val Asn Leu Ser Val Ala Leu
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gtg gat atg gta gat tca aat aca act tta gaa gat aat aga act tcc   297

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Val Asp Met Val Asp Ser Asn Thr Thr Leu Glu Asp Asn Arg Thr Ser
65                    70              75                  80

aag gcg tgt cca gag cat tct gct ccc ata aaa gtt cat cat aat caa    345
Lys Ala Cys Pro Glu His Ser Ala Pro Ile Lys Val His His Asn Gln
                    85                  90                  95

acg ggt aag aag tac caa tgg gat gca gaa act caa gga tgg att ctc    393
Thr Gly Lys Lys Tyr Gln Trp Asp Ala Glu Thr Gln Gly Trp Ile Leu
                100              105             110

ggt tcc ttt ttt tat ggc tac atc atc aca cag att cct gga gga tat    441
Gly Ser Phe Phe Tyr Gly Tyr Ile Ile Thr Gln Ile Pro Gly Gly Tyr
        115             120             125

gtt gcc agc aaa ata ggg ggg aaa atg ctg cta gga ttt ggg atc ctt    489
Val Ala Ser Lys Ile Gly Gly Lys Met Leu Leu Gly Phe Gly Ile Leu
        130             135             140

ggc act gct gtc ctc acc ctg ttc act ccc att gct gca gat tta gga    537
Gly Thr Ala Val Leu Thr Leu Phe Thr Pro Ile Ala Ala Asp Leu Gly
145                 150             155                 160

gtt gga cca ctc att gta ctc aga gca cta gaa gga cta gga gag ggt    585
Val Gly Pro Leu Ile Val Leu Arg Ala Leu Glu Gly Leu Gly Glu Gly
                165             170             175

gtt aca ttt cca gcc atg cat gcc atg tgg tct tct tgg gct ccc cct    633
Val Thr Phe Pro Ala Met His Ala Met Trp Ser Ser Trp Ala Pro Pro
                180             185             190

ctt gaa aga agc aaa ctt ctt agc att tcg tat gca gga gca cag ctt    681
Leu Glu Arg Ser Lys Leu Leu Ser Ile Ser Tyr Ala Gly Ala Gln Leu
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ggg aca gta att tct ctt cct ctt tct gga ata att tgc tac tat atg    729
Gly Thr Val Ile Ser Leu Pro Leu Ser Gly Ile Ile Cys Tyr Tyr Met
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aat tgg act tat gtc ttc tac ttt ttt ggt act att gga ata ttt tgg    777
Asn Trp Thr Tyr Val Phe Tyr Phe Phe Gly Thr Ile Gly Ile Phe Trp
225                 230             235             240

ttt ctt ttg tgg atc tgg tta gtt agt gac aca cca caa aaa cac aag    825
Phe Leu Leu Trp Ile Trp Leu Val Ser Asp Thr Pro Gln Lys His Lys
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aga att tcc cat tat gaa aag gaa tac att ctt tca tca tta aga aat    873
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2

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Arg Ile Ser His Tyr Glu Lys Glu Tyr Ile Leu Ser Ser Leu Arg Asn
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cag ctt tct tca cag aag tca gtg ccg tgg gta ccc att tta aaa tcc   921
Gln Leu Ser Ser Gln Lys Ser Val Pro Trp Val Pro Ile Leu Lys Ser
         275             280             285

ctg cca ctt tgg gct atc gta gtt gca cac ttt tct tac aac tgg act   969
Leu Pro Leu Trp Ala Ile Val Val Ala His Phe Ser Tyr Asn Trp Thr
     290             295             300

ttt tat act tta ttg aca tta ttg cct act tat atg aag gag atc cta  1017
Phe Tyr Thr Leu Leu Thr Leu Leu Pro Thr Tyr Met Lys Glu Ile Leu
305             310             315             320

agg ttc aat gtt caa gag aat ggg ttt tta tct tca ttg cct tat tta  1065
Arg Phe Asn Val Gln Glu Asn Gly Phe Leu Ser Ser Leu Pro Tyr Leu
             325             330             335

ggc tct tgg tta tgt atg atc ctg tct ggt caa gct gct gac aat tta  1113
Gly Ser Trp Leu Cys Met Ile Leu Ser Gly Gln Ala Ala Asp Asn Leu
         340             345             350

agg gca aaa tgg aat ttt tca act tta tgt gtt cgc aga att ttt agc  1161
Arg Ala Lys Trp Asn Phe Ser Thr Leu Cys Val Arg Arg Ile Phe Ser
         355             360             365

ctt ata gga atg att gga cct gca gta ttc ctg gta gct gct ggc ttc  1209
Leu Ile Gly Met Ile Gly Pro Ala Val Phe Leu Val Ala Ala Gly Phe
         370             375             380

att ggc tgt gat tat tct ttg gcc gtt gct ttc cta act ata tca aca  1257
Ile Gly Cys Asp Tyr Ser Leu Ala Val Ala Phe Leu Thr Ile Ser Thr
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aca ctg gga ggc ttt tgc tct tct gga ttt agc atc aac cat ctg gat  1305
Thr Leu Gly Gly Phe Cys Ser Ser Gly Phe Ser Ile Asn His Leu Asp
             405             410             415

att gct cct tcg tat gct ggt atc ctc ctg ggc atc aca aat aca ttt  1353
Ile Ala Pro Ser Tyr Ala Gly Ile Leu Leu Gly Ile Thr Asn Thr Phe
             420             425             430

gcc act att cca gga atg gtt ggg ccc gtc att gct aaa agt ctg acc  1401
Ala Thr Ile Pro Gly Met Val Gly Pro Val Ile Ala Lys Ser Leu Thr
             435             440             445

cct gat aac act gtt gga gaa tgg caa acc gtg ttc tat att gct gct  1449
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3

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Pro Asp Asn Thr Val Gly Glu Trp Gln Thr Val Phe Tyr Ile Ala Ala
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Ala Ile Asn Val Phe Gly Ala Ile Phe Phe Thr Leu Phe Ala Lys Gly
465             470             475             480

gaa gta caa aac tgg gct ctc aat gat cac cat gga cac aga cac        1542
Glu Val Gln Asn Trp Ala Leu Asn Asp His His Gly His Arg His
                485             490             495
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tgaaggaacc aataaataat cctgcctcta ttaatgtatt tttatttatc atgtaacctc 1602

aaagtgcctt ctgtattgtg taagcattct atgtcttttt ttaattgtac ttgtattaga 1662

tttttaaggc ctataatcat gaaatatcac tagttgccag aataataaaa tgaactgtgt 1722

ttaattatga ataatatgta agctaggact tctactttag gttcacatac ctgcctgcta 1782

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agctgaaaca gacctcctga tacctttgct taattaaact agatgataat tctcaggtac 1902

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             20                  25                  30

Pro Val Cys Cys Ser Ala Arg Tyr Asn Leu Ala Ile Leu Ala Phe Phe
         35                  40                  45

Gly Phe Phe Ile Val Tyr Ala Leu Arg Val Asn Leu Ser Val Ala Leu
     50                  55                  60

Val Asp Met Val Asp Ser Asn Thr Thr Leu Glu Asp Asn Arg Thr Ser
 65                  70                  75                  80

Lys Ala Cys Pro Glu His Ser Ala Pro Ile Lys Val His His Asn Gln
                 85                  90                  95

Thr Gly Lys Lys Tyr Gln Trp Asp Ala Glu Thr Gln Gly Trp Ile Leu
            100                 105                 110

Gly Ser Phe Phe Tyr Gly Tyr Ile Ile Thr Gln Ile Pro Gly Gly Tyr
            115                 120                 125

Val Ala Ser Lys Ile Gly Gly Lys Met Leu Leu Gly Phe Gly Ile Leu
        130                 135                 140

Gly Thr Ala Val Leu Thr Leu Phe Thr Pro Ile Ala Ala Asp Leu Gly
145                 150                 155                 160

Val Gly Pro Leu Ile Val Leu Arg Ala Leu Glu Gly Leu Gly Glu Gly
                165                 170                 175

Val Thr Phe Pro Ala Met His Ala Met Trp Ser Ser Trp Ala Pro Pro
            180                 185                 190

Leu Glu Arg Ser Lys Leu Leu Ser Ile Ser Tyr Ala Gly Ala Gln Leu
            195                 200                 205

Gly Thr Val Ile Ser Leu Pro Leu Ser Gly Ile Ile Cys Tyr Tyr Met
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5

Asn Trp Thr Tyr Val Phe Tyr Phe Phe Gly Thr Ile Gly Ile Phe Trp
225   230   235   240

Phe Leu Leu Trp Ile Trp Leu Val Ser Asp Thr Pro Gln Lys His Lys
                245   250   255

Arg Ile Ser His Tyr Glu Lys Glu Tyr Ile Leu Ser Ser Leu Arg Asn
                260   265   270

Gln Leu Ser Ser Gln Lys Ser Val Pro Trp Val Pro Ile Leu Lys Ser
                275   280   285

Leu Pro Leu Trp Ala Ile Val Val Ala His Phe Ser Tyr Asn Trp Thr
    290   295   300

Phe Tyr Thr Leu Leu Thr Leu Leu Pro Thr Tyr Met Lys Glu Ile Leu
305   310   315   320

Arg Phe Asn Val Gln Glu Asn Gly Phe Leu Ser Ser Leu Pro Tyr Leu
                325   330   335

Gly Ser Trp Leu Cys Met Ile Leu Ser Gly Gln Ala Ala Asp Asn Leu
                340   345   350

Arg Ala Lys Trp Asn Phe Ser Thr Leu Cys Val Arg Arg Ile Phe Ser
                355   360   365

Leu Ile Gly Met Ile Gly Pro Ala Val Phe Leu Val Ala Ala Gly Phe
    370   375   380

Ile Gly Cys Asp Tyr Ser Leu Ala Val Ala Phe Leu Thr Ile Ser Thr
385   390   395   400

Thr Leu Gly Gly Phe Cys Ser Ser Gly Phe Ser Ile Asn His Leu Asp
                405   410   415

Ile Ala Pro Ser Tyr Ala Gly Ile Leu Leu Gly Ile Thr Asn Thr Phe
                420   425   430

Ala Thr Ile Pro Gly Met Val Gly Pro Val Ile Ala Lys Ser Leu Thr
                435   440   445

Pro Asp Asn Thr Val Gly Glu Trp Gln Thr Val Phe Tyr Ile Ala Ala
    450   455   460

Ala Ile Asn Val Phe Gly Ala Ile Phe Phe Thr Leu Phe Ala Lys Gly
465   470   475   480

6

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                        Met Lys Ser Pro Val Ser Asp Leu Ala Pro
                         1   5   10

agc gac ggc gag gag ggc tcg gac cgc aca ccg ctc ctg cag cgc gcc   161
Ser Asp Gly Glu Glu Gly Ser Asp Arg Thr Pro Leu Leu Gln Arg Ala
             15   20   25

ccg cgg gcg gaa ccc gct cca gta tgc tgc tct gct cgt tac aac cta   209
Pro Arg Ala Glu Pro Ala Pro Val Cys Cys Ser Ala Arg Tyr Asn Leu
                 30   35   40

gca ttt ttg tcc ttt ttt ggt ttc ttc gtt ctc tat tca tta cgg gtg   257
Ala Phe Leu Ser Phe Phe Gly Phe Phe Val Leu Tyr Ser Leu Arg Val
             45   50   55

aat ctg agc gtt gca cta gtg gac atg gtg gat tca aac aca act gcc   305
Asn Leu Ser Val Ala Leu Val Asp Met Val Asp Ser Asn Thr Thr Ala
     60   65   70

aaa gat aat aga acg tcc tac gag tgt gca gag cat tct gct ccc ata   353
Lys Asp Asn Arg Thr Ser Tyr Glu Cys Ala Glu His Ser Ala Pro Ile
 75   80   85   90

aaa gtt ctt cac aac caa acg ggt aaa aag tac cgg tgg gat gca gaa   401
Lys Val Leu His Asn Gln Thr Gly Lys Lys Tyr Arg Trp Asp Ala Glu
                 95   100   105

act caa gga tgg att ctc gga tct ttt ttc tat ggc tac atc atc aca   449
Thr Gln Gly Trp Ile Leu Gly Ser Phe Phe Tyr Gly Tyr Ile Ile Thr
                 110   115   120

7

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caa att cct gga gga tat gtt gcc agc aga agt ggg ggg aag ctg ttg   497
Gln Ile Pro Gly Gly Tyr Val Ala Ser Arg Ser Gly Gly Lys Leu Leu
        125                 130                 135

cta gga ttc ggg atc ttt gct aca gct atc ttc acc ctg ttc act ccc   545
Leu Gly Phe Gly Ile Phe Ala Thr Ala Ile Phe Thr Leu Phe Thr Pro
        140                 145                 150

ctc gct gca gat ttc gga gtc gga gcc ctt gtt gca ctc agg gca cta   593
Leu Ala Ala Asp Phe Gly Val Gly Ala Leu Val Ala Leu Arg Ala Leu
155                 160                 165                 170

gaa ggg cta gga gag ggt gtc aca tat cca gcc atg cat gcc atg tgg   641
Glu Gly Leu Gly Glu Gly Val Thr Tyr Pro Ala Met His Ala Met Trp
                175                 180                 185

tct tca tgg gct ccc cct ctt gaa aga agc aag ctt ctg agt att tca   689
Ser Ser Trp Ala Pro Pro Leu Glu Arg Ser Lys Leu Leu Ser Ile Ser
                190                 195                 200

tat gca gga gca caa ctt ggg aca gta gtt tct ctt cct ctt tct gga   737
Tyr Ala Gly Ala Gln Leu Gly Thr Val Val Ser Leu Pro Leu Ser Gly
        205                 210                 215

gta att tgc tac tat atg aat tgg act tat gtc ttc tat ttc ttt ggc   785
Val Ile Cys Tyr Tyr Met Asn Trp Thr Tyr Val Phe Tyr Phe Phe Gly
        220                 225                 230

att gtt gga atc atc tgg ttt att tta tgg atc tgc tta gtt agt gat   833
Ile Val Gly Ile Ile Trp Phe Ile Leu Trp Ile Cys Leu Val Ser Asp
235                 240                 245                 250

aca cca gaa act cac aag aca atc act ccc tat gaa aag gag tat att   881
Thr Pro Glu Thr His Lys Thr Ile Thr Pro Tyr Glu Lys Glu Tyr Ile
                255                 260                 265

ctt tca tca tta aaa aat cag ctc tct tca cag aag tca gtg ccg tgg   929
Leu Ser Ser Leu Lys Asn Gln Leu Ser Ser Gln Lys Ser Val Pro Trp
                270                 275                 280

ata cct atg ctg aaa tca ctg cca ctt tgg gct att gtc gtt gca cat   977
Ile Pro Met Leu Lys Ser Leu Pro Leu Trp Ala Ile Val Val Ala His
                285                 290                 295

ttt tct tac aac tgg act ttt tat act ttg ttg acc tta ttg cct act   1025
Phe Ser Tyr Asn Trp Thr Phe Tyr Thr Leu Leu Thr Leu Leu Pro Thr
        300                 305                 310
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8

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tac atg aag gaa gtc cta agg ttc aat att caa gag aat ggg ttt tta    1073
Tyr Met Lys Glu Val Leu Arg Phe Asn Ile Gln Glu Asn Gly Phe Leu
315             320             325             330

tct gca gtc cct tat tta ggt tgt tgg tta tgt atg atc ctg tcg ggt    1121
Ser Ala Val Pro Tyr Leu Gly Cys Trp Leu Cys Met Ile Leu Ser Gly
                335             340             345

caa gct gct gac aat tta agg gca aga tgg aat ttt tca act ctg tgg    1169
Gln Ala Ala Asp Asn Leu Arg Ala Arg Trp Asn Phe Ser Thr Leu Trp
            350             355             360

gtt cga aga gtt ttt agc ctt ata ggg atg att gga cct gcg ata ttc    1217
Val Arg Arg Val Phe Ser Leu Ile Gly Met Ile Gly Pro Ala Ile Phe
            365             370             375

ctg gtt gcc gca gga ttt ata ggc tgt gat tat tcc ttg gct gtt gca    1265
Leu Val Ala Ala Gly Phe Ile Gly Cys Asp Tyr Ser Leu Ala Val Ala
            380             385             390

ttc cta acc ata tca aca acc ctg gga ggc ttt tgc tct tct gga ttt    1313
Phe Leu Thr Ile Ser Thr Thr Leu Gly Gly Phe Cys Ser Ser Gly Phe
395             400             405             410

agc atc aac cat ctg gac att gct cct tcg tat gct ggt att ctc ctg    1361
Ser Ile Asn His Leu Asp Ile Ala Pro Ser Tyr Ala Gly Ile Leu Leu
            415             420             425

ggc atc aca aat acc ttt gcc act att cct gga atg att ggg ccc atc    1409
Gly Ile Thr Asn Thr Phe Ala Thr Ile Pro Gly Met Ile Gly Pro Ile
            430             435             440

att gcc aga agt ctt acc cct gag aac act att gga gaa tgg caa act    1457
Ile Ala Arg Ser Leu Thr Pro Glu Asn Thr Ile Gly Glu Trp Gln Thr
            445             450             455

gtt ttc tgc atc gct gct gct atc aat gta ttt ggt gcc att ttc ttc    1505
Val Phe Cys Ile Ala Ala Ala Ile Asn Val Phe Gly Ala Ile Phe Phe
            460             465             470

aca cta ttc gcc aaa ggt gaa gtg caa aac tgg gcc atc agt gat cac    1553
Thr Leu Phe Ala Lys Gly Glu Val Gln Asn Trp Ala Ile Ser Asp His
475             480             485             490

caa gga cac aga aac tgaaggaacc aataaataat cctgtctcta ttaatgtatc    1608
Gln Gly His Arg Asn
            495
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9

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tttgtttatc atgtaaccta aaagtgcctt tgatatttta atgtgtaagc aatctatata 1668

caagataaaa ttgtactaga aaaattgtgt tagatttgta aggcttgtaa tcatgaaatg 1728

tcactagttg ccatataagc aaaattagct atttttaatt attattaacc cgtttgctgg 1788

aacttacaat tcagggtcac atatctggct gcaagtcagg caacccacaa taggggagtt 1848

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gcttaattaa ggtggataat aattctcagg tcttgttaaa catctgtttt tgtacacctt 1968

cctcaaaaaa ttatttgtca tcagcaatcc ctgacatgta ggtctcaaac tttagcctct 2028

ccacggagct ggcagccact gtatcattca gcctggcaac ttcactgagg gaagcatgcc 2088

caggcagctg ccacatgtcc cctctctggc ttcagggaca gtgcccagca cttaggcagc 2148

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Pro Val Cys Cys Ser Ala Arg Tyr Asn Leu Ala Phe Leu Ser Phe Phe
        35   40   45

Gly Phe Phe Val Leu Tyr Ser Leu Arg Val Asn Leu Ser Val Ala Leu
    50   55   60

Val Asp Met Val Asp Ser Asn Thr Thr Ala Lys Asp Asn Arg Thr Ser
65   70   75   80

Tyr Glu Cys Ala Glu His Ser Ala Pro Ile Lys Val Leu His Asn Gln
            85   90   95

Thr Gly Lys Lys Tyr Arg Trp Asp Ala Glu Thr Gln Gly Trp Ile Leu
            100   105   110

Gly Ser Phe Phe Tyr Gly Tyr Ile Ile Thr Gln Ile Pro Gly Gly Tyr
        115   120   125

Val Ala Ser Arg Ser Gly Gly Lys Leu Leu Leu Gly Phe Gly Ile Phe
    130   135   140

Ala Thr Ala Ile Phe Thr Leu Phe Thr Pro Leu Ala Ala Asp Phe Gly
145   150   155   160

Val Gly Ala Leu Val Ala Leu Arg Ala Leu Glu Gly Leu Gly Glu Gly
            165   170   175

Val Thr Tyr Pro Ala Met His Ala Met Trp Ser Ser Trp Ala Pro Pro
        180   185   190

Leu Glu Arg Ser Lys Leu Leu Ser Ile Ser Tyr Ala Gly Ala Gln Leu
        195   200   205

Gly Thr Val Val Ser Leu Pro Leu Ser Gly Val Ile Cys Tyr Tyr Met
    210   215   220

Asn Trp Thr Tyr Val Phe Tyr Phe Phe Gly Ile Val Gly Ile Ile Trp
225   230   235   240

Phe Ile Leu Trp Ile Cys Leu Val Ser Asp Thr Pro Glu Thr His Lys
            245   250   255

11.

Thr Ile Thr Pro Tyr Glu Lys Glu Tyr Ile Leu Ser Ser Leu Lys Asn
          260   265   270

Gln Leu Ser Ser Gln Lys Ser Val Pro Trp Ile Pro Met Leu Lys Ser
          275   280   285

Leu Pro Leu Trp Ala Ile Val Val Ala His Phe Ser Tyr Asn Trp Thr
          290   295   300

Phe Tyr Thr Leu Leu Thr Leu Leu Pro Thr Tyr Met Lys Glu Val Leu
305   310   315   320

Arg Phe Asn Ile Gln Glu Asn Gly Phe Leu Ser Ala Val Pro Tyr Leu
                  325   330   335

Gly Cys Trp Leu Cys Met Ile Leu Ser Gly Gln Ala Ala Asp Asn Leu
          340   345   350

Arg Ala Arg Trp Asn Phe Ser Thr Leu Trp Val Arg Arg Val Phe Ser
          355   360   365

Leu Ile Gly Met Ile Gly Pro Ala Ile Phe Leu Val Ala Ala Gly Phe
          370   375   380

Ile Gly Cys Asp Tyr Ser Leu Ala Val Ala Phe Leu Thr Ile Ser Thr
385   390   395   400

Thr Leu Gly Gly Phe Cys Ser Ser Gly Phe Ser Ile Asn His Leu Asp
                  405   410   415

Ile Ala Pro Ser Tyr Ala Gly Ile Leu Leu Gly Ile Thr Asn Thr Phe
              420   425   430

Ala Thr Ile Pro Gly Met Ile Gly Pro Ile Ile Ala Arg Ser Leu Thr
          435   440   445

Pro Glu Asn Thr Ile Gly Glu Trp Gln Thr Val Phe Cys Ile Ala Ala
          450   455   460

Ala Ile Asn Val Phe Gly Ala Ile Phe Phe Thr Leu Phe Ala Lys Gly
465   470   475   480

Glu Val Gln Asn Trp Ala Ile Ser Asp His Gln Gly His Arg Asn
              485   490   495

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<210> 6
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gcgggagacg gtcgtccgaa caccggctcc ccggcatgcg tagaccggcg ggcggagcgg 180

gctcactttg cgccaatcct acgagaactc ccagaactcc gcttccctag tccaacccaa 240

gccagagttg cccacaccta ag atg gcg gcg ggg gcg atg aca ccg ccc cgc 292
                          Met Ala Ala Gly Ala Met Thr Pro Pro Arg
                           1   5   10

ccg gtc cag cca gct cgg ccc ggg ggc ttc ggg ctg tcg ggc cgg cgc 340
Pro Val Gln Pro Ala Arg Pro Gly Gly Phe Gly Leu Ser Gly Arg Arg
            15   20   25

13

```
tcc ctt ctc tgc cag gtg gcg agt aca cct gct cac gta ggc gtc atg      388
Ser Leu Leu Cys Gln Val Ala Ser Thr Pro Ala His Val Gly Val Met
            30                  35                  40

agg tct ccg gtt cga gac ctg gcc cgg aac gat ggc gag gag agc acg      436
Arg Ser Pro Val Arg Asp Leu Ala Arg Asn Asp Gly Glu Glu Ser Thr
            45                  50                  55

gac cgc acg cct ctt cta ccg ggc gcc cca cgg gcc gaa gcc gct cca      484
Asp Arg Thr Pro Leu Leu Pro Gly Ala Pro Arg Ala Glu Ala Ala Pro
        60                  65                  70

gtg tgc tgc tct gct cgt tac aac tta gca att ttg gcc ttt ttt ggt      532
Val Cys Cys Ser Ala Arg Tyr Asn Leu Ala Ile Leu Ala Phe Phe Gly
    75                  80                  85                  90

ttc ttc att gtg tat gca tta cgt gtg aat ctg agt gtt gcg tta gtg      580
Phe Phe Ile Val Tyr Ala Leu Arg Val Asn Leu Ser Val Ala Leu Val
                95                  100                 105

gat atg gta gat tca aat aca act tta gaa gat aat aga act tcc aag      628
Asp Met Val Asp Ser Asn Thr Thr Leu Glu Asp Asn Arg Thr Ser Lys
            110                 115                 120

gcg tgt cca gag cat tct gct ccc ata aaa gtt cat cat aat caa acg      676
Ala Cys Pro Glu His Ser Ala Pro Ile Lys Val His His Asn Gln Thr
        125                 130                 135

ggt aag aag tac caa tgg gat gca gaa act caa gga tgg att ctc ggt      724
Gly Lys Lys Tyr Gln Trp Asp Ala Glu Thr Gln Gly Trp Ile Leu Gly
        140                 145                 150

tcc ttt ttt tat ggc tac atc atc aca cag att cct gga gga tat gtt      772
Ser Phe Phe Tyr Gly Tyr Ile Ile Thr Gln Ile Pro Gly Gly Tyr Val
155                 160                 165                 170

gcc agc aaa ata ggg ggg aaa atg ctg cta gga ttt ggg atc ctt ggc      820
Ala Ser Lys Ile Gly Gly Lys Met Leu Leu Gly Phe Gly Ile Leu Gly
                175                 180                 185

act gct gtc ctc acc ctg ttc act ccc att gct gca gat tta gga gtt      868
Thr Ala Val Leu Thr Leu Phe Thr Pro Ile Ala Ala Asp Leu Gly Val
                190                 195                 200

gga cca ctc att gta ctc aga gca cta gaa gga cta gga gag ggt gtt      916
Gly Pro Leu Ile Val Leu Arg Ala Leu Glu Gly Leu Gly Glu Gly Val
            205                 210                 215
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14

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aca ttt cca gcc atg cat gcc atg tgg tct tct tgg gct ccc cct ctt    964
Thr Phe Pro Ala Met His Ala Met Trp Ser Ser Trp Ala Pro Pro Leu
    220             225             230

gaa aga agc aaa ctt ctt agc att tcg tat gca gga gca cag ctt ggg   1012
Glu Arg Ser Lys Leu Leu Ser Ile Ser Tyr Ala Gly Ala Gln Leu Gly
    235             240             245             250

aca gta att tct ctt cct ctt tct gga ata att tgc tac tat atg aat   1060
Thr Val Ile Ser Leu Pro Leu Ser Gly Ile Ile Cys Tyr Tyr Met Asn
                255             260             265

tgg act tat gtc ttc tac ttt ttt ggt act att gga ata ttt tgg ttt   1108
Trp Thr Tyr Val Phe Tyr Phe Phe Gly Thr Ile Gly Ile Phe Trp Phe
                270             275             280

ctt ttg tgg atc tgg tta gtt agt gac aca cca caa aaa cac aag aga   1156
Leu Leu Trp Ile Trp Leu Val Ser Asp Thr Pro Gln Lys His Lys Arg
            285             290             295

att tcc cat tat gaa aag gaa tac att ctt tca tca tta aga aat cag   1204
Ile Ser His Tyr Glu Lys Glu Tyr Ile Leu Ser Ser Leu Arg Asn Gln
    300             305             310

ctt tct tca cag aag tca gtg ccg tgg gta ccc att tta aaa tcc ctg   1252
Leu Ser Ser Gln Lys Ser Val Pro Trp Val Pro Ile Leu Lys Ser Leu
315             320             325             330

cca ctt tgg gct atc gta gtt gca cac ttt tct tac aac tgg act ttt   1300
Pro Leu Trp Ala Ile Val Val Ala His Phe Ser Tyr Asn Trp Thr Phe
                335             340             345

tat act tta ttg aca tta ttg cct act tat atg aag gag atc cta agg   1348
Tyr Thr Leu Leu Thr Leu Leu Pro Thr Tyr Met Lys Glu Ile Leu Arg
            350             355             360

ttc aat gtt caa gag aat ggg ttt tta tct tca ttg cct tat tta ggc   1396
Phe Asn Val Gln Glu Asn Gly Phe Leu Ser Ser Leu Pro Tyr Leu Gly
            365             370             375

tct tgg tta tgt atg atc ctg tct ggt caa gct gct gac aat tta agg   1444
Ser Trp Leu Cys Met Ile Leu Ser Gly Gln Ala Ala Asp Asn Leu Arg
    380             385             390

gca aaa tgg aat ttt tca act tta tgt gtt cgc aga att ttt agc ctt   1492
Ala Lys Trp Asn Phe Ser Thr Leu Cys Val Arg Arg Ile Phe Ser Leu
395             400             405             410
```

15

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ata gga atg att gga cct gca gta ttc ctg gta gct gct ggc ttc att     1540
Ile Gly Met Ile Gly Pro Ala Val Phe Leu Val Ala Ala Gly Phe Ile
                415                 420                 425

ggc tgt gat tat tct ttg gcc gtt gct ttc cta act ata tca aca aca     1588
Gly Cys Asp Tyr Ser Leu Ala Val Ala Phe Leu Thr Ile Ser Thr Thr
                430                 435                 440

ctg gga ggc ttt tgc tct tct gga ttt agc atc aac cat ctg gat att     1636
Leu Gly Gly Phe Cys Ser Ser Gly Phe Ser Ile Asn His Leu Asp Ile
                445                 450                 455

gct cct tcg tat gct ggt atc ctc ctg ggc atc aca aat aca ttt gcc     1684
Ala Pro Ser Tyr Ala Gly Ile Leu Leu Gly Ile Thr Asn Thr Phe Ala
                460                 465                 470

act att cca gga atg gtt ggg ccc gtc att gct aaa agt ctg acc cct     1732
Thr Ile Pro Gly Met Val Gly Pro Val Ile Ala Lys Ser Leu Thr Pro
475                 480                 485                 490

gat aac act gtt gga gaa tgg caa acc gtg ttc tat att gct gct gct     1780
Asp Asn Thr Val Gly Glu Trp Gln Thr Val Phe Tyr Ile Ala Ala Ala
                495                 500                 505

att aat gtt ttt ggt gcc att ttc ttt aca cta ttc gcc aaa ggt gaa     1828
Ile Asn Val Phe Gly Ala Ile Phe Phe Thr Leu Phe Ala Lys Gly Glu
                510                 515                 520

gta caa aac tgg gct ctc aat gat cac cat gga cac aga cac             1870
Val Gln Asn Trp Ala Leu Asn Asp His His Gly His Arg His
                525                 530                 535


tgaaggaacc aataaataat cctgcctcta ttaatgtatt tttatttatc atgtaacctc 1930

aaagtgcctt ctgtattgtg taagcattct atgtcttttt ttaattgtac ttgtattaga 1990

tttttaaggc ctataatcat gaaatatcac tagttgccag aataataaaa tgaactgtgt 2050

ttaattatga ataatatgta agctaggact tctactttag gttcacatac ctgcctgcta 2110

gtcgggcaac atgaagtagg acagttctgt tgatttttta gggccatact aaagggaatg 2170

agctgaaaca gacctcctga tacctttgct taattaaact agatgataat tctcaggtac 2230

tgataaacac ctgttgttgt tcactttcct cataaaaatt gtcagctctc tctgacactt 2290

agacctcaaa ctttagcatc tctgtggagc tgccatccac tgtataattt cgcctggcaa 2350
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16

ctggactgag gggagtgtgc ccaggcagct gccaagcact ccctccctgg cttcagggtc 2410

agagtgccca gcgtttatca gaggcagcat ccaagcccag agccagtgtc gactcttcgg 2470

ctggtgcctt tcctctgagg ggctatcaat gtgtagataa agccctgagt aggcaagagc 2530

agtgagatcc actgctatgg tcttgataca tcctcaaact ttcccttccc agcacagagg 2590

aatattggct ggcatgcaac ctgcaaaaga aaaatgcgaa gcggccgggc acggtggctc 2650

atgcctgtaa tcccagcact ttggggggct gaggtgggcg aatcatgaga tcaggagttc 2710

gagaccagcc tggccagcat ggtgaaaccc catctctact aaaaatacaa aaaattagct 2770

gggcgtggtg acgggcgcct gtaatcccag atactcagga ggctgaggta ggagaatcac 2830

ttgaacctgg gaggtggaag ttgcagtgaa ccaagatcac gccactgcac tccagcctgg 2890

gcgatggagc gagactccaa ctcaaaaaaa aaaaaaaaaa   2930

<210> 8
<211> 536
<212> PRT
<213> Homo sapiens

<400> 8
Met Ala Ala Gly Ala Met Thr Pro Pro Arg Pro Val Gln Pro Ala Arg
  1   5   10   15

Pro Gly Gly Phe Gly Leu Ser Gly Arg Arg Ser Leu Leu Cys Gln Val
            20   25   30

Ala Ser Thr Pro Ala His Val Gly Val Met Arg Ser Pro Val Arg Asp
          35   40   45

Leu Ala Arg Asn Asp Gly Glu Glu Ser Thr Asp Arg Thr Pro Leu Leu
      50   55   60

Pro Gly Ala Pro Arg Ala Glu Ala Ala Pro Val Cys Cys Ser Ala Arg
65   70   75   80

Tyr Asn Leu Ala Ile Leu Ala Phe Phe Gly Phe Phe Ile Val Tyr Ala
                85   90   95

Leu Arg Val Asn Leu Ser Val Ala Leu Val Asp Met Val Asp Ser Asn
            100   105   110

17

Thr Thr Leu Glu Asp Asn Arg Thr Ser Lys Ala Cys Pro Glu His Ser
        115   120   125

Ala Pro Ile Lys Val His His Asn Gln Thr Gly Lys Lys Tyr Gln Trp
        130   135   140

Asp Ala Glu Thr Gln Gly Trp Ile Leu Gly Ser Phe Phe Tyr Gly Tyr
145   150   155   160

Ile Ile Thr Gln Ile Pro Gly Gly Tyr Val Ala Ser Lys Ile Gly Gly
            165   170   175

Lys Met Leu Leu Gly Phe Gly Ile Leu Gly Thr Ala Val Leu Thr Leu
            180   185   190

Phe Thr Pro Ile Ala Ala Asp Leu Gly Val Gly Pro Leu Ile Val Leu
        195   200   205

Arg Ala Leu Glu Gly Leu Gly Glu Gly Val Thr Phe Pro Ala Met His
    210   215   220

Ala Met Trp Ser Ser Trp Ala Pro Pro Leu Glu Arg Ser Lys Leu Leu
225   230   235   240

Ser Ile Ser Tyr Ala Gly Ala Gln Leu Gly Thr Val Ile Ser Leu Pro
            245   250   255

Leu Ser Gly Ile Ile Cys Tyr Tyr Met Asn Trp Thr Tyr Val Phe Tyr
            260   265   270

Phe Phe Gly Thr Ile Gly Ile Phe Trp Phe Leu Leu Trp Ile Trp Leu
        275   280   285

Val Ser Asp Thr Pro Gln Lys His Lys Arg Ile Ser His Tyr Glu Lys
    290   295   300

Glu Tyr Ile Leu Ser Ser Leu Arg Asn Gln Leu Ser Ser Gln Lys Ser
305   310   315   320

Val Pro Trp Val Pro Ile Leu Lys Ser Leu Pro Leu Trp Ala Ile Val
            325   330   335

Val Ala His Phe Ser Tyr Asn Trp Thr Phe Tyr Thr Leu Leu Thr Leu
            340   345   350

Leu Pro Thr Tyr Met Lys Glu Ile Leu Arg Phe Asn Val Gln Glu Asn
        355   360   365

18

```
Gly Phe Leu Ser Ser Leu Pro Tyr Leu Gly Ser Trp Leu Cys Met Ile
    370             375             380

Leu Ser Gly Gln Ala Ala Asp Asn Leu Arg Ala Lys Trp Asn Phe Ser
385             390             395             400

Thr Leu Cys Val Arg Arg Ile Phe Ser Leu Ile Gly Met Ile Gly Pro
            405             410             415

Ala Val Phe Leu Val Ala Ala Gly Phe Ile Gly Cys Asp Tyr Ser Leu
            420             425             430

Ala Val Ala Phe Leu Thr Ile Ser Thr Thr Leu Gly Gly Phe Cys Ser
        435             440             445

Ser Gly Phe Ser Ile Asn His Leu Asp Ile Ala Pro Ser Tyr Ala Gly
    450             455             460

Ile Leu Leu Gly Ile Thr Asn Thr Phe Ala Thr Ile Pro Gly Met Val
465             470             475             480

Gly Pro Val Ile Ala Lys Ser Leu Thr Pro Asp Asn Thr Val Gly Glu
            485             490             495

Trp Gln Thr Val Phe Tyr Ile Ala Ala Ala Ile Asn Val Phe Gly Ala
        500             505             510

Ile Phe Phe Thr Leu Phe Ala Lys Gly Glu Val Gln Asn Trp Ala Leu
        515             520             525

Asn Asp His His Gly His Arg His
    530             535


<210> 9
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: human/sheep
      consensus sequence

<220>
<221> CDS
<222> (1)..(1485)
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<400> 9

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atg arg tcy ccg gtt ysr gac ytr gcc csg arc gay ggc gag gag rgc    48
Met Xaa Xaa Pro Val Xaa Asp Xaa Ala Xaa Xaa Xaa Gly Glu Glu Xaa
 1               5                  10                  15


wcg gac cgc acr cck cty ctr cmg sgc gcc ccr cgg gcs gaa scc gct    96
Xaa Asp Arg Xaa Xaa Xaa Xaa Xaa Xaa Ala Xaa Arg Xaa Glu Xaa Ala
             20                  25                  30


cca gtr tgc tgc tct gct cgt tac aac yta gca wtt ttg kcc ttt ttt   144
Pro Xaa Cys Cys Ser Ala Arg Tyr Asn Xaa Ala Xaa Leu Xaa Phe Phe
             35                  40                  45


ggt ttc ttc rtt sts tat kca tta cgk gtg aat ctg agy gtt gcr yta   192
Gly Phe Phe Xaa Xaa Tyr Xaa Leu Xaa Val Asn Leu Xaa Val Xaa Xaa
             50                  55                  60


gtg gay atg gtr gat tca aay aca act kym raa gat aat aga ack tcc   240
Val Xaa Met Xaa Asp Ser Xaa Thr Thr Xaa Xaa Asp Asn Arg Xaa Ser
 65                  70                  75                  80


was gmg tgt sca gag cat tct gct ccc ata aaa gtt cwt cay aay caa   288
Xaa Xaa Cys Xaa Glu His Ser Ala Pro Ile Lys Val Xaa Xaa Xaa Gln
                 85                  90                  95


acg ggt aar aag tac crr tgg gat gca gaa act caa gga tgg att ctc   336
Thr Gly Xaa Lys Tyr Xaa Trp Asp Ala Glu Thr Gln Gly Trp Ile Leu
            100                 105                 110


ggw tcy ttt tty tat ggc tac atc atc aca car att cct gga gga tat   384
Xaa Xaa Phe Xaa Tyr Gly Tyr Ile Ile Thr Xaa Ile Pro Gly Gly Tyr
            115                 120                 125


gtt gcc agc ara akw ggg ggg aar mtg ytg cta gga tty ggg atc ytt   432
Val Ala Ser Xaa Xaa Gly Gly Xaa Xaa Xaa Leu Gly Xaa Gly Ile Xaa
            130                 135                 140


gsy acw gct rtc ytc acc ctg ttc act ccc mty gct gca gat ttm gga   480
Xaa Xaa Ala Xaa Xaa Thr Leu Phe Thr Pro Xaa Ala Ala Asp Xaa Gly
145                 150                 155                 160


gty gga scm cty rtt gya ctc agr gca cta gaa ggr cta gga gag ggt   528
Xaa Gly Xaa Xaa Xaa Xaa Leu Xaa Ala Leu Glu Xaa Leu Gly Glu Gly
                165                 170                 175


gty aca twt cca gcc atg cat gcc atg tgg tct tcw tgg gct ccc cct   576
Xaa Thr Xaa Pro Ala Met His Ala Met Trp Ser Xaa Trp Ala Pro Pro
                180                 185                 190
```

20

```
ctt gaa aga agc aar ctt ctk agy att tcr tat gca gga gca car ctt    624
Leu Glu Arg Ser Xaa Leu Xaa Xaa Ile Xaa Tyr Ala Gly Ala Xaa Leu
        195             200             205


ggg aca gta rtt tct ctt cct ctt tct gga rta att tgc tac tat atg    672
Gly Thr Val Xaa Ser Leu Pro Leu Ser Gly Xaa Ile Cys Tyr Tyr Met
        210             215             220


aat tgg act tat gtc ttc tay tty ttt ggy ayt rtt gga atm wty tgg    720
Asn Trp Thr Tyr Val Phe Xaa Xaa Phe Xaa Xaa Xaa Gly Xaa Xaa Trp
225             230             235             240


ttt mtt ttr tgg atc tgs tta gtt agt gay aca cca saa amw cac aag    768
Phe Xaa Xaa Trp Ile Xaa Leu Val Ser Xaa Thr Pro Xaa Xaa His Lys
                245             250             255


asa aty wcy cmy tat gaa aag gar tay att ctt tca tca tta ara aat    816
Xaa Xaa Xaa Xaa Tyr Glu Lys Xaa Xaa Ile Leu Ser Ser Leu Xaa Asn
        260             265             270


cag cty tct tca cag aag tca gtg ccg tgg rta ccy atk ytr aaa tcm    864
Gln Xaa Ser Ser Gln Lys Ser Val Pro Trp Xaa Xaa Xaa Xaa Lys Xaa
        275             280             285


ctg cca ctt tgg gct aty gtm gtt gca cay ttt tct tac aac tgg act    912
Leu Pro Leu Trp Ala Xaa Xaa Val Ala Xaa Phe Ser Tyr Asn Trp Thr
        290             295             300


ttt tat act ttr ttg acm tta ttg cct act tay atg aag gar rtc cta    960
Phe Tyr Thr Xaa Leu Xaa Leu Leu Pro Thr Xaa Met Lys Xaa Xaa Leu
305             310             315             320


agg ttc aat rtt caa gag aat ggg ttt tta tct kca kts cct tat tta   1008
Arg Phe Asn Xaa Gln Glu Asn Gly Phe Leu Ser Xaa Xaa Pro Tyr Leu
                325             330             335


ggy tst tgg tta tgt atg atc ctg tck ggt caa gct gct gac aat tta   1056
Xaa Xaa Trp Leu Cys Met Ile Leu Xaa Gly Gln Ala Ala Asp Asn Leu
                340             345             350


agg gca ara tgg aat ttt tca act ytr tgk gtt cgm aga rtt ttt agc   1104
Arg Ala Xaa Trp Asn Phe Ser Thr Xaa Xaa Val Xaa Arg Xaa Phe Ser
        355             360             365


ctt ata ggr atg att gga cct gcr rta ttc ctg gtw gcy gcw ggm tty   1152
Leu Ile Xaa Met Ile Gly Pro Xaa Xaa Phe Leu Xaa Xaa Xaa Xaa Xaa
        370             375             380
```

21

```
atw ggc tgt gat tat tcy ttg gcy gtt gcw ttc cta acy ata tca aca      1200
Xaa Gly Cys Asp Tyr Xaa Leu Xaa Val Xaa Phe Leu Xaa Ile Ser Thr
385                 390             395                 400

acm ctg gga ggc ttt tgc tct tct gga ttt agc atc aac cat ctg gay      1248
Xaa Leu Gly Gly Phe Cys Ser Ser Gly Phe Ser Ile Asn His Leu Xaa
                405             410                 415

att gct cct tcg tat gct ggt aty ctc ctg ggc atc aca aat acm ttt      1296
Ile Ala Pro Ser Tyr Ala Gly Xaa Leu Leu Gly Ile Thr Asn Xaa Phe
                420             425                 430

gcc act att ccw gga atg rtt ggg ccc rtc att gcy ara agt ctk acc      1344
Ala Thr Ile Xaa Gly Met Xaa Gly Pro Xaa Ile Xaa Xaa Ser Xaa Thr
            435             440                 445

cct gak aac act rtt gga gaa tgg caa acy gtk ttc try aty gct gct      1392
Pro Xaa Asn Thr Xaa Gly Glu Trp Gln Xaa Xaa Phe Xaa Xaa Ala Ala
        450             455                 460

gct aty aat gtw ttt ggt gcc att ttc tty aca cta ttc gcc aaa ggt      1440
Ala Xaa Asn Xaa Phe Gly Ala Ile Phe Xaa Thr Leu Phe Ala Lys Gly
465             470                 475                 480

gaa gtr caa aac tgg gcy mtc art gat cac caw gga cac aga mac          1485
Glu Xaa Gln Asn Trp Xaa Xaa Xaa Asp His Xaa Gly His Arg Xaa
                485                 490                 495


<210> 10
<211> 495
<212> PRT
<213> Artificial Sequence

<400> 10
Met Xaa Xaa Pro Val Xaa Asp Xaa Ala Xaa Xaa Xaa Gly Glu Glu Xaa
1               5                   10                  15

Xaa Asp Arg Xaa Xaa Xaa Xaa Xaa Xaa Ala Xaa Arg Xaa Glu Xaa Ala
            20                  25                  30

Pro Xaa Cys Cys Ser Ala Arg Tyr Asn Xaa Ala Xaa Leu Xaa Phe Phe
            35                  40                  45

Gly Phe Phe Xaa Xaa Tyr Xaa Leu Xaa Val Asn Leu Xaa Val Xaa Xaa
        50                  55                  60
```

22

```
Val Xaa Met Xaa Asp Ser Xaa Thr Thr Xaa Xaa Asp Asn Arg Xaa Ser
65              70              75              80

Xaa Xaa Cys Xaa Glu His Ser Ala Pro Ile Lys Val Xaa Xaa Xaa Gln
            85              90              95

Thr Gly Xaa Lys Tyr Xaa Trp Asp Ala Glu Thr Gln Gly Trp Ile Leu
        100             105             110

Xaa Xaa Phe Xaa Tyr Gly Tyr Ile Ile Thr Xaa Ile Pro Gly Gly Tyr
        115             120             125

Val Ala Ser Xaa Xaa Gly Gly Xaa Xaa Xaa Leu Gly Xaa Gly Ile Xaa
    130             135             140

Xaa Xaa Ala Xaa Xaa Thr Leu Phe Thr Pro Xaa Ala Ala Asp Xaa Gly
145             150             155             160

Xaa Gly Xaa Xaa Xaa Xaa Leu Xaa Ala Leu Glu Xaa Leu Gly Glu Gly
            165             170             175

Xaa Thr Xaa Pro Ala Met His Ala Met Trp Ser Xaa Trp Ala Pro Pro
        180             185             190

Leu Glu Arg Ser Xaa Leu Xaa Xaa Ile Xaa Tyr Ala Gly Ala Xaa Leu
        195             200             205

Gly Thr Val Xaa Ser Leu Pro Leu Ser Gly Xaa Ile Cys Tyr Tyr Met
    210             215             220

Asn Trp Thr Tyr Val Phe Xaa Xaa Phe Xaa Xaa Xaa Gly Xaa Xaa Trp
225             230             235             240

Phe Xaa Xaa Trp Ile Xaa Leu Val Ser Xaa Thr Pro Xaa Xaa His Lys
        245             250             255

Xaa Xaa Xaa Xaa Tyr Glu Lys Xaa Xaa Ile Leu Ser Ser Leu Xaa Asn
        260             265             270

Gln Xaa Ser Ser Gln Lys Ser Val Pro Trp Xaa Xaa Xaa Xaa Lys Xaa
        275             280             285

Leu Pro Leu Trp Ala Xaa Xaa Val Ala Xaa Phe Ser Tyr Asn Trp Thr
    290             295             300

Phe Tyr Thr Xaa Leu Xaa Leu Leu Pro Thr Xaa Met Lys Xaa Xaa Leu
305             310             315             320
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23

Arg Phe Asn Xaa Gln Glu Asn Gly Phe Leu Ser Xaa Xaa Pro Tyr Leu
             325   330   335

Xaa Xaa Trp Leu Cys Met Ile Leu Xaa Gly Gln Ala Ala Asp Asn Leu
             340   345   350

Arg Ala Xaa Trp Asn Phe Ser Thr Xaa Xaa Val Xaa Arg Xaa Phe Ser
             355   360   365

Leu Ile Xaa Met Ile Gly Pro Xaa Xaa Phe Leu Xaa Xaa Xaa Xaa Xaa
       370   375   380

Xaa Gly Cys Asp Tyr Xaa Leu Xaa Val Xaa Phe Leu Xaa Ile Ser Thr
385   390   395   400

Xaa Leu Gly Gly Phe Cys Ser Ser Gly Phe Ser Ile Asn His Leu Xaa
             405   410   415

Ile Ala Pro Ser Tyr Ala Gly Xaa Leu Leu Gly Ile Thr Asn Xaa Phe
             420   425   430

Ala Thr Ile Xaa Gly Met Xaa Gly Pro Xaa Ile Xaa Xaa Ser Xaa Thr
             435   440   445

Pro Xaa Asn Thr Xaa Gly Glu Trp Gln Xaa Xaa Phe Xaa Xaa Ala Ala
       450   455   460

Ala Xaa Asn Xaa Phe Gly Ala Ile Phe Xaa Thr Leu Phe Ala Lys Gly
465   470   475   480

Glu Xaa Gln Asn Trp Xaa Xaa Xaa Asp His Xaa Gly His Arg Xaa
             485   490   495

<210> 11
<211> 1485
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: human/sheep
      consencus sequence

<220>
<221> CDS
<222> (1)..(1485)

<400> 11

24

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atg ang tcn ccg gtt nnn gac ntn gcc cng anc gan ggc gag gag ngc    48
Met Xaa Xaa Pro Val Xaa Asp Xaa Ala Xaa Xaa Xaa Gly Glu Glu Xaa
 1               5                  10                  15

ncg gac cgc acn ccn ctn ctn cng ngc gcc ccn cgg gcn gaa ncc gct    96
Xaa Asp Arg Xaa Xaa Xaa Xaa Xaa Xaa Ala Xaa Arg Xaa Glu Xaa Ala
             20                  25                  30

cca gtn tgc tgc tct gct cgt tac aac nta gca ntt ttg ncc ttt ttt   144
Pro Xaa Cys Cys Ser Ala Arg Tyr Asn Xaa Ala Xaa Leu Xaa Phe Phe
         35                  40                  45

ggt ttc ttc ntt ntn tat nca tta cgn gtg aat ctg agn gtt gcn nta   192
Gly Phe Phe Xaa Xaa Tyr Xaa Leu Xaa Val Asn Leu Xaa Val Xaa Xaa
     50                  55                  60

gtg gan atg gtn gat tca aan aca act nnn naa gat aat aga acn tcc   240
Val Xaa Met Xaa Asp Ser Xaa Thr Thr Xaa Xaa Asp Asn Arg Xaa Ser
 65              70                  75                  80

nan gng tgt nca gag cat tct gct ccc ata aaa gtt cnt can aan caa   288
Xaa Xaa Cys Xaa Glu His Ser Ala Pro Ile Lys Val Xaa Xaa Xaa Gln
             85                  90                  95

acg ggt aan aag tac cnn tgg gat gca gaa act caa gga tgg att ctc   336
Thr Gly Xaa Lys Tyr Xaa Trp Asp Ala Glu Thr Gln Gly Trp Ile Leu
            100                 105                 110

ggn tcn ttt ttn tat ggc tac atc atc aca can att cct gga gga tat   384
Xaa Xaa Phe Xaa Tyr Gly Tyr Ile Ile Thr Xaa Ile Pro Gly Gly Tyr
        115                 120                 125

gtt gcc agc ana ann ggg ggg aan ntg ntg cta gga ttn ggg atc ntt   432
Val Ala Ser Xaa Xaa Gly Gly Xaa Xaa Xaa Leu Gly Xaa Gly Ile Xaa
        130                 135                 140

gnn acn gct ntc ntc acc ctg ttc act ccc ntn gct gca gat ttn gga   480
Xaa Xaa Ala Xaa Xaa Thr Leu Phe Thr Pro Xaa Ala Ala Asp Xaa Gly
145                 150                 155                 160

gtn gga ncn ctn ntt gna ctc agn gca cta gaa ggn cta gga gag ggt   528
Xaa Gly Xaa Xaa Xaa Xaa Leu Xaa Ala Leu Glu Xaa Leu Gly Glu Gly
            165                 170                 175

gtn aca tnt cca gcc atg cat gcc atg tgg tct tcn tgg gct ccc cct   576
Xaa Thr Xaa Pro Ala Met His Ala Met Trp Ser Xaa Trp Ala Pro Pro
            180                 185                 190
```

25

```
ctt gaa aga agc aan ctt ctn agn att tcn tat gca gga gca can ctt    624
Leu Glu Arg Ser Xaa Leu Xaa Xaa Ile Xaa Tyr Ala Gly Ala Xaa Leu
            195             200             205


ggg aca gta ntt tct ctt cct ctt tct gga nta att tgc tac tat atg    672
Gly Thr Val Xaa Ser Leu Pro Leu Ser Gly Xaa Ile Cys Tyr Tyr Met
            210             215             220


aat tgg act tat gtc ttc tan ttn ttt ggn ant ntt gga atn ntn tgg    720
Asn Trp Thr Tyr Val Phe Xaa Xaa Phe Xaa Xaa Xaa Gly Xaa Xaa Trp
225             230             235             240


ttt ntt ttn tgg atc tgn tta gtt agt gan aca cca naa ann cac aag    768
Phe Xaa Xaa Trp Ile Xaa Leu Val Ser Xaa Thr Pro Xaa Xaa His Lys
                245             250             255


ana atn ncn cnn tat gaa aag gan tan att ctt tca tca tta ana aat    816
Xaa Xaa Xaa Xaa Tyr Glu Lys Xaa Xaa Ile Leu Ser Ser Leu Xaa Asn
                260             265             270


cag ctn tct tca cag aag tca gtg ccg tgg nta ccn atn ntn aaa tcn    864
Gln Xaa Ser Ser Gln Lys Ser Val Pro Trp Xaa Xaa Xaa Xaa Lys Xaa
            275             280             285


ctg cca ctt tgg gct atn gtn gtt gca can ttt tct tac aac tgg act    912
Leu Pro Leu Trp Ala Xaa Xaa Val Ala Xaa Phe Ser Tyr Asn Trp Thr
            290             295             300


ttt tat act ttn ttg acn tta ttg cct act tan atg aag gan ntc cta    960
Phe Tyr Thr Xaa Leu Xaa Leu Leu Pro Thr Xaa Met Lys Xaa Xaa Leu
305             310             315             320


agg ttc aat ntt caa gag aat ggg ttt tta tct nca ntn cct tat tta    1008
Arg Phe Asn Xaa Gln Glu Asn Gly Phe Leu Ser Xaa Xaa Pro Tyr Leu
                325             330             335


ggn tnt tgg tta tgt atg atc ctg tcn ggt caa gct gct gac aat tta    1056
Xaa Xaa Trp Leu Cys Met Ile Leu Xaa Gly Gln Ala Ala Asp Asn Leu
            340             345             350


agg gca ana tgg aat ttt tca act ntn tgn gtt cgn aga ntt ttt agc    1104
Arg Ala Xaa Trp Asn Phe Ser Thr Xaa Xaa Val Xaa Arg Xaa Phe Ser
            355             360             365


ctt ata ggn atg att gga cct gcn nta ttc ctg gtn gcn gcn ggn ttn    1152
Leu Ile Xaa Met Ile Gly Pro Xaa Xaa Phe Leu Xaa Xaa Xaa Xaa Xaa
            370             375             380
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26

```
atn ggc tgt gat tat tcn ttg gcn gtt gcn ttc cta acn ata tca aca     1200
Xaa Gly Cys Asp Tyr Xaa Leu Xaa Val Xaa Phe Leu Xaa Ile Ser Thr
385                 390             395                 400

acn ctg gga ggc ttt tgc tct tct gga ttt agc atc aac cat ctg gan     1248
Xaa Leu Gly Gly Phe Cys Ser Ser Gly Phe Ser Ile Asn His Leu Xaa
                405             410                 415

att gct cct tcg tat gct ggt atn ctc ctg ggc atc aca aat acn ttt     1296
Ile Ala Pro Ser Tyr Ala Gly Xaa Leu Leu Gly Ile Thr Asn Xaa Phe
                420             425                 430

gcc act att ccn gga atg ntt ggg ccc ntc att gcn ana agt ctn acc     1344
Ala Thr Ile Xaa Gly Met Xaa Gly Pro Xaa Ile Xaa Xaa Ser Xaa Thr
            435             440                 445

cct gan aac act ntt gga gaa tgg caa acn gtn ttc tnn atn gct gct     1392
Pro Xaa Asn Thr Xaa Gly Glu Trp Gln Xaa Xaa Phe Xaa Xaa Ala Ala
        450             455                 460

gct atn aat gtn ttt ggt gcc att ttc ttn aca cta ttc gcc aaa ggt     1440
Ala Xaa Asn Xaa Phe Gly Ala Ile Phe Xaa Thr Leu Phe Ala Lys Gly
465                 470             475                 480

gaa gtn caa aac tgg gcn ntc ant gat cac can gga cac aga nac        1485
Glu Xaa Gln Asn Trp Xaa Xaa Xaa Asp His Xaa Gly His Arg Xaa
                485                 490                 495
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<211> 495
<212> PRT
<213> Artificial Sequence

<400> 12
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Xaa Asp Arg Xaa Xaa Xaa Xaa Xaa Xaa Ala Xaa Arg Xaa Glu Xaa Ala
            20              25              30

Pro Xaa Cys Cys Ser Ala Arg Tyr Asn Xaa Ala Xaa Leu Xaa Phe Phe
            35              40              45

Gly Phe Phe Xaa Xaa Tyr Xaa Leu Xaa Val Asn Leu Xaa Val Xaa Xaa
        50              55              60

Val Xaa Met Xaa Asp Ser Xaa Thr Thr Xaa Xaa Asp Asn Arg Xaa Ser
```

27

Xaa Xaa Cys Xaa Glu His Ser Ala Pro Ile Lys Val Xaa Xaa Xaa Gln
                85   90   95

Thr Gly Xaa Lys Tyr Xaa Trp Asp Ala Glu Thr Gln Gly Trp Ile Leu
            100   105   110

Xaa Xaa Phe Xaa Tyr Gly Tyr Ile Ile Thr Xaa Ile Pro Gly Gly Tyr
            115   120   125

Val Ala Ser Xaa Xaa Gly Gly Xaa Xaa Xaa Leu Gly Xaa Gly Ile Xaa
            130   135   140

Xaa Xaa Ala Xaa Xaa Thr Leu Phe Thr Pro Xaa Ala Ala Asp Xaa Gly
145   150   155   160

Xaa Gly Xaa Xaa Xaa Xaa Leu Xaa Ala Leu Glu Xaa Leu Gly Glu Gly
                165   170   175

Xaa Thr Xaa Pro Ala Met His Ala Met Trp Ser Xaa Trp Ala Pro Pro
            180   185   190

Leu Glu Arg Ser Xaa Leu Xaa Xaa Ile Xaa Tyr Ala Gly Ala Xaa Leu
            195   200   205

Gly Thr Val Xaa Ser Leu Pro Leu Ser Gly Xaa Ile Cys Tyr Tyr Met
210   215   220

Asn Trp Thr Tyr Val Phe Xaa Xaa Phe Xaa Xaa Xaa Gly Xaa Xaa Trp
225   230   235   240

Phe Xaa Xaa Trp Ile Xaa Leu Val Ser Xaa Thr Pro Xaa Xaa His Lys
            245   250   255

Xaa Xaa Xaa Xaa Tyr Glu Lys Xaa Xaa Ile Leu Ser Ser Leu Xaa Asn
            260   265   270

Gln Xaa Ser Ser Gln Lys Ser Val Pro Trp Xaa Xaa Xaa Xaa Lys Xaa
            275   280   285

Leu Pro Leu Trp Ala Xaa Xaa Val Ala Xaa Phe Ser Tyr Asn Trp Thr
            290   295   300

Phe Tyr Thr Xaa Leu Xaa Leu Leu Pro Thr Xaa Met Lys Xaa Xaa Leu
305   310   315   320

Arg Phe Asn Xaa Gln Glu Asn Gly Phe Leu Ser Xaa Xaa Pro Tyr Leu

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                325                         330                         335

Xaa Xaa Trp Leu Cys Met Ile Leu Xaa Gly Gln Ala Ala Asp Asn Leu
        340                 345                 350

Arg Ala Xaa Trp Asn Phe Ser Thr Xaa Xaa Val Xaa Arg Xaa Phe Ser
        355                 360                 365

Leu Ile Xaa Met Ile Gly Pro Xaa Xaa Phe Leu Xaa Xaa Xaa Xaa Xaa
    370                 375                 380

Xaa Gly Cys Asp Tyr Xaa Leu Xaa Val Xaa Phe Leu Xaa Ile Ser Thr
385                 390                 395                 400

Xaa Leu Gly Gly Phe Cys Ser Ser Gly Phe Ser Ile Asn His Leu Xaa
                405                 410                 415

Ile Ala Pro Ser Tyr Ala Gly Xaa Leu Leu Gly Ile Thr Asn Xaa Phe
            420                 425                 430

Ala Thr Ile Xaa Gly Met Xaa Gly Pro Xaa Ile Xaa Xaa Ser Xaa Thr
        435                 440                 445

Pro Xaa Asn Thr Xaa Gly Glu Trp Gln Xaa Xaa Phe Xaa Xaa Ala Ala
    450                 455                 460

Ala Xaa Asn Xaa Phe Gly Ala Ile Phe Xaa Thr Leu Phe Ala Lys Gly
465                 470                 475                 480

Glu Xaa Gln Asn Trp Xaa Xaa Xaa Asp His Xaa Gly His Arg Xaa
                485                 490                 495
```

29